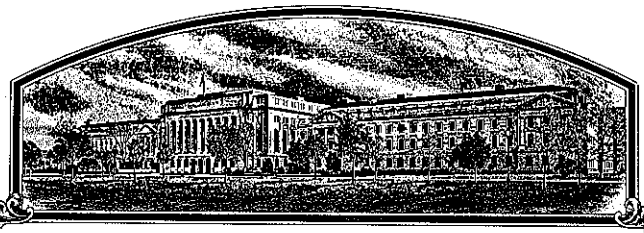

No. 8900031

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Ferry-Morse Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

TOMATO

'Colusa'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 28th day of February in the year of our Lord one thousand nine hundred and ninety-two.

Attest:

Kenneth B. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Edward Madigan
Secretary of Agriculture

APPROVAL EXPIRES 2-28-88

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION	3. VARIETY NAME
FERRY-MORSE SEED COMPANY	FM 48452	COLUSA

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*	5. PHONE *(Include area code)*	FOR OFFICIAL USE ONLY
P. O. BOX 4938 MODESTO, CALIFORNIA 95352-4938	(209)579-7333	PVPO NUMBER 8900031

6. GENUS AND SPECIES NAME	7. FAMILY NAME *(Botanical)*
LYCOPERSICON ESCULENTUM MILL.	SOLANACEAE

FILING
DATE: Nov. 15, 1988
TIME: 1:30 ☐ A.M. ☑ P.M.

8. KIND NAME	9. DATE OF DETERMINATION
TOMATO	JANUARY, 1988

FEES RECEIVED
AMOUNT FOR FILING: $ 1800.00
DATE: Nov. 14, 1988
AMOUNT FOR CERTIFICATE: $ 200.00
DATE: Feb. 7, 1992

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*

CORPORATION

11. IF INCORPORATED, GIVE STATE OF INCORPORATION	12. DATE OF INCORPORATION
CALIFORNIA	4 APRIL 1969

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

~~DR. DAVID J. THOMPSON, PRESIDENT~~ DR. LARRY GAUTNEY
FERRY-MORSE SEED COMPANY
P. O. BOX ~~4938~~ 1010
~~MODESTO,~~ SAN JUAN BAUTISTA, CALIFORNIA ~~95352-4938~~ 95045

PHONE *(Include area code)*: (408)637-7461 ~~(209)579-7333~~

MA 8 Oct 1991

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. ☒ Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
b. ☒ Exhibit B, Novelty Statement.
c. ☒ Exhibit C, Objective Description of Variety *(Request form from Plant Variety Protection Office.)*
d. ☒ Exhibit D, Additional Description of Variety.
e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act.)* ☐ Yes *(If "Yes," answer items 16 and 17 below)* ☒ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?	17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? N/A
☐ Yes ☒ No	☐ Foundation ☐ Registered ☐ Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?

☐ Yes *(If "Yes," give date)*
☒ No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES ?

U.S. - FERRY-MORSE PRICE LIST 4/1/88

☒ Yes *(If "Yes," give names of countries and dates)*
☐ No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT	DATE
[signature]	7 NOVEMBER 1988
SIGNATURE OF APPLICANT	DATE

FORM LS-470 (3-86) *Edition of 7-84 obsolete.*

1

VARIETY : Colusa (Formerly FM 48452)
EXHIBIT A : Origin and Breeding History of the variety.

Colusa was developed, using the pedigree method of breeding, from a Ferry - Morse cross made at San Juan Bautista, CA, in July of 1979 between Peto 81 used as the seed parent and E9208 used as the pollen parent. E9208 was later named Peelmech and was a Ferry - Morse development.

F1 plants were medium - large determinate with medium sized square - round fruit exhibiting (while immature) a light green shoulder. F2 seeds from several F1 plants were harvested from field row # 76004 in October 1980 at San Juan Bautista, CA.

F2 plants in 1981 had very good crops of firm medium sized fruit. Segregation occurred for immature fruit color, occurrance of hollow locules, maturity, and for resistance to Fusarium Wilt race 2. Vine size, foliage type, and fruit shape were quite uniform. F3 seeds were saved from five selected plants in field row # 21910 in August 1981 at our Fusarium Wilt race 2 field screening near Knights Landing, CA.

F3 generation progenies of the five selected plants were screened for resistance to Fusarium Wilt race 2 and noted at San Juan Bautista in October 1982. The first progeny row was homozygous resistant to F. race 2 and had the best fruit qualities and yield with light green shouldered immature fruit. F4 seeds were massed from 20 plants in field row # 91509 because the row looked quite uniform.

The F4 generation plants also looked quite uniform with all 40 plants exhibiting the light green shoulder fruit trait while immature. Since their appeared to be some variation for maturity, F5 seed were harvested from four selected plants in row # 40044 in October 1983 at San Juan Bautista. These four selections all tested homozygous resistant to Fusarium Wilt race 2.

In 1984 the F5 generation plants looked very uniform in selection # 4 and seed was bulked from all 35 plants in field row # 48452 at San Juan Bautista. No segregation for maturity, hollow locules, or immature fruit color was noted. The leaflets were large, coarse, and curly at harvest. The fruit were square - round, firm, and matured early.

In 1985 this lot (# 48452 - MS/84) was placed in a variety trial at San Juan Bautista along with UC82B, VF6203, Peelmech and UC204C. FM48452 had the lowest pH of any open pollinated variety in trial with one of the highest yields and fruit quality. The fruit size was midway between UC82B and VF6203 with equal firmness. FM48452 had similar vine type and size as VF6203 with similar soluble solids but distinctly lower pH and percent hollow locule fruit.

Trials throughout central California in 1985 through 1988 have shown that FM48452 is a high quality, high yielding VF6203 type processing tomato with resistance to Fusarium Wilt race 2.

Seed was harvested from 300 plants in 1985 at San Juan Bautista for increase and cannery trials. A stock seed increase of 4000 plants was harvested in October of 1986 at San Juan Bautista. No obvious off types plants or fruit were observed in either increase and the variety appeared very uniform and stable. Subsequent trials of these seed lots were also uniform with no obvious segregation.

September 26, 1988

VARIETY : Colusa (formerly FM48452)
EXHIBIT B : Novelty Statement

Colusa is most similar to Peto 81. Colusa can be distinguished from its Peelmech parent on the basis of its resistance to Fusarium Wilt race 2 and its light green shoulder which Peelmech lacks. Peto 81 has both these characteristics.

Colusa was compared to Peto 81 in 1986 and 1987 at San Juan Bautista, CA and at Sun Prairie,Wis. The number of nodes between the first and second inflorescences was the most distinct plant character distinguishing the two varieties. In each of the trials node counts were made on at least 52 consecutive plants of each variety in adjacent rows with the following results:

	Cal/86	Cal/87	Wis/86	Wis/87
Colusa	2.08 nodes	2.14 nodes	2.26 nodes	1.77 nodes
Peto 81	1.38 nodes	1.67 nodes	1.98 nodes	1.62 nodes
Calc t value	5.14 **	3.37 **	1.78 *	1.23
Degrees of freedom	102	114	156	168
Probability	0.0000007	0.0005	0.0388	0.1099

September 26, 1988

FORM APPROVED: OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN AND SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Tomato)

OBJECTIVE DESCRIPTION OF VARIETY

TOMATO *(Lycopersicon esculentum* Mill.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Ferry-Morse Seed Company	FM48452	Colusa

ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*

555 Codoni, P.O. Box 4938, Modest, CA 95352-4938

FOR OFFICIAL USE ONLY
PVPO NUMBER
8900031

Choose responses for the following characters which best fit your variety. Complete this form as fully as possible for best characterization of the variety. When a single quantitative value is requested (e.g., fruit weight), your answer should be the mean of an adequate-sized, unbiased sample of plants. Use leading zeroes when necessary (e.g., [0][9] or [0][8][1], etc.). The applicant variety should be compared with at least one well-known standard check variety of the same type (see list of recommended check varieties below), and grown in the same trials. The characters on this form should be described from plants grown under normal conditions of culture for the variety. Indicate by a check whether trial data are from greenhouse ____ or field __X__ plantings. Trials direct-seeded ____ or transplanted __X__ ; staked ____ or unstaked __X__ . Give locations and dates of seeding and transplanting here: ____

San Juan Bautista, CA seeded 4/2/86 transplanted 5/13/86
San Juan Bautista, CA seeded 4/1/87 transplanted 5/5/87

COMPARISONS SHOULD BE MADE TO ONE OR MORE CHECK VARIETIES IN THE FOLLOWING LIST, IF AT ALL POSSIBLE. ENTER THE NUMBER OF THE CHECK IN BOXES WHERE IDENTITY OF CHECK IS REQUESTED.

1 = Ace 55 VF
2 = Campbell 37
3 = Chico III
4 = Flora Dade
5 = Florida MH-1
6 = Heinz 1350
7 = Homestead 24
8 = Marglobe
9 = Murietta
10 = New Yorker
11 = Ohio MR-13
12 = Red Cherry Large
13 = Red Rock
14 = Roma VF
15 = Rutgers
16 = Sunray
17 = Tropic
18 = UC 82
19 = VF 134
20 = US 28
21 = VF 145 B 7879
22 = Other *(Specify)* VF6203

1. SEEDLING:

[2] Anthocyanin in hypocotyl of 2-15 cm. seedling: 1 = Absent 2 = Present

[1] Habit of 3-4 week old seedling: 1 = Normal 2 = Compact

2. MATURE PLANT (at maximum vegetative development):

[ ][ ][ ] Cm. Height

[2] Growth: 1 = Indeterminate 2 = Determinate

[2] Form: 1 = Lax, open 2 = Normal 3 = Compact 4 = Dwarf 5 = Brachytic

[2] Size of canopy (compared to others of similar type): 1 = Small 2 = Medium 3 = Large

[1] Habit: 1 = Sprawling (decumbent) 2 = Semi-erect 3 = Erect ('Dwarf Champion')

3. STEM:

[2] Branching: 1 = Sparse ('Brehm's Solid Red', 'Fireball') 2 = Intermediate ('Westover') 3 = Profuse ('UC 82')

[ ] Branching at cotyledonary or first leafy node: 1 = Present 2 = Absent

[3] No. of nodes below the first inflorescence: 1 = 1-4 2 = 4-7 3 = 7-10 4 = 10 or more

[2] No. of nodes between early (1st - 2nd, 2nd - 3rd) inflorescences.

[ ] No. of nodes between later-developing inflorescences.

[3] Pubescence on younger stems: 1 = Smooth (no long hairs) 2 = Sparsely hairy (scattered long hairs) 3 = Moderately hairy 4 = Densely hairy or wooly

4. LEAF (mature leaf beneath the 3rd inflorescence):

[1] Type: 1 = Tomato 2 = Potato ('Trip-L-Crop')

[2] Morphology *(choose illustration on pg. 5 of this form that is most similar)*

[3] Margins of major leaflets: 1 = Nearly entire 2 = Shallowly toothed or scalloped 3 = Deeply toothed or cut, esp. towards base

[3] Marginal rolling or wiltiness: 1 = Absent 2 = Slight 3 = Moderate 4 = Strong

[2] Onset of leaflet rolling: 1 = Early-season 2 = Mid-season 3 = Late season

4. LEAF (mature leaf beneath the 3rd inflorescence -- continued):

[1] Surface of major leaflets: 1 = Smooth 2 = Rugose (bumpy or veiny)

[2] Pubescence: 1 = Smooth (no long hairs) 2 = Normal 3 = Hirsute 4 = Wooly

5. INFLORESCENCE (make observations on 3rd inflorescence):

[1] Type: 1 = Simple 2 = Forked (2 major axes) 3 = Compound (much branched)

[0 6] Number of flowers in inflorescence, average

[1] Leafy or "running" inflorescences: 1 = Absent 2 = Occasional 3 = Frequent

6. FLOWER:

[1] Calyx: 1 = Normal, lobes awl-shaped 2 = Macrocalyx, lobes large, leaflike 3 = Fleshy

– [1] Calyx-lobes: 1 = Shorter than corolla 2 = Approx. equalling corolla 3 = Distinctly longer than corolla

[1] Corolla color: 1 = Yellow 2 = Old gold 3 = White or tan

– [1] Style pubescence: 1 = Absent 2 = Sparse 3 = Dense

[1] Anthers: 1 = All fused into tube 2 = Separating into 2 or more groups at anthesis

[1] Fasciation (1st flower of 2nd or 3rd inflorescence): 1 = Absent 2 = Occasionally present 3 = Frequently present

7. FRUIT (3rd fruit of 2nd or 3rd cluster): *For the first 5 characters below, match your variety with the most similar illustration on pg. 5 of this form.*

[1 0] Typical fruit shape:

[3] Shape of transverse section:

[1] Shape of stem end:

[2] Shape of blossom end:

[1] Shape of pistil scar:

---

[1] Abscission layer: 1 = Present (pedicellate) 2 = Absent (jointless)

[1] Point of detachment of fruit at harvest: 1 = At pedicel joint 2 = At calyx attachment

[1 1] mm length of pedicel (from joint to calyx attachment)

86 + 87 / SJB

[0 5 6] mm length of mature fruit (stem axis)	[0 5 8]	mm length, check var. no.	[2 2]
[0 4 8] mm diameter of fruit at widest point	[0 5 0]	mm diameter, check var. no.	[2 2]
[0 7 4] g weight of mature fruit	[0 7 9]	g weight, check var. no.	[2 2]

[2] No. of locules: 1 = Two 2 = Three and four 3 = Five or more

[1] Fruit surface: 1 = Smooth 2 = Slightly rough 3 = Moderately rough or ribbed

[1] Fruit base color (mature-green stage): 1 = Light green ('Lanai', 'VF145-F5') 2 = Light gray-green ('Westover') 3 = Apple or medium green ('Heinz 1439 VF') 4 = Yellow green 5 = Dark green

[2] Fruit pattern (mature-green stage): 1 = Uniform green 2 = Green-shouldered 3 = Radial stripes on sides of fruit

[2] Shoulder color if different from base: 1 = Dark green 2 = Grey green 3 = Yellow green

[5] Fruit color, full-ripe: 1 = White 2 = Yellow 3 = Orange 4 = Pink 5 = Red 6 = Brownish 7 = Greenish 8 = Other *(Specify)* _____

[3] Flesh color, full-ripe: 1 = Yellow 2 = Pink 3 = Red/Crimson 4 = Orange 5 = Other *(Specify)* _____

[1] Flesh color: 1 = Uniform 2 = With lighter and darker areas in walls

[2] Locular gel color of table-ripe fruit: 1 = Green 2 = Yellow 3 = Red

[2] Ripening: 1 = Blossom-to-stem end 2 = Uniform

7. FRUIT (3rd fruit of 2nd or 3rd cluster): Continued

[2] Ripening: 1 = Inside out 2 = Uniformly 3 = Outside in

[2] Epidermis color: 1 = Colorless 2 = Yellow

[1] Epidermis: 1 = Normal 2 = Easy-peel

[3] Epidermis texture: 1 = Tender 2 = Average 3 = Tough

[3] Thickness of pericarp . . . . . [3]

1 = Under 3 mm 2 = 3-6 mm 3 = 6-9 mm 4 = Over 9 mm

Thickness of pericarp, check var. no. [2][2]

[1] Stem scar size: 1 = Small ('Roma') 2 = Medium ('Rutgers') 3 = Large

[1] Core: 1 = Coreless (absent or smaller than 6x6 mm) 2 = Present

8. RESISTANCE TO FRUIT DISORDERS (Use code: 0 = Unknown, 1 = Susceptible, 2 = Resistant)

[0]	Blossom end rot	[2]	Catface	[2]	Fruit pox	[2]	Zippering
[0]	Blotchy ripening	[2]	Cracking, concentric	[2]	Gold fleck	[ ]	Other *(Specify)*
[0]	Bursting	[2]	Cracking, radial	[0]	Graywall		

9. DISEASE AND PEST REACTION (Use code: 0 = Not tested, 1 = Susceptible, 2 = Resistant). NOTE: If claim of novelty is based wholly or in substantial part upon disease resistance, trial data should be appended. These should specify the method of testing, the reaction of the application variety, and reaction of well-known check varieties grown in the trial (identified by name).

VIRAL DISEASES:

[0]	Cucumber mosaic	[0]	Tobacco mosaic, Race 0	[0]	Tobacco mosaic, Race 2[2]
[0]	Curly top	[0]	Tobacco mosaic, Race 1	[0]	Tomato spotted wilt
[0]	Potato-Y virus	[0]	Tobacco mosaic, Race 2	[0]	Tomato yellows
[ ]	Other virus *(Specify)* _____				

BACTERIAL DISEASES:

[0]	Bacterial canker *(Corynebacterium michiganense)*	[0]	Bacterial spot *(Xanthomonas vesicatorium)*
[0]	Bacterial soft rot *(Erwinia carotovora)*	[0]	Bacterial wilt, *(Pseudomonas solanacearum)*
[0]	Bacterial speck *(Pseudomonas tomato)*	[ ]	Other bacterial disease *(Specify)* _____

FUNGAL DISEASES:

[0]	Anthracnose *(Colletotrichum* spp.*)*	[0]	Leaf mold, Race 1 *(Cladosporium fulvum)*
[1]	Brown root rot or corky root, *(Pyrenochaeta lycopersici)*	[0]	Leaf mold, Race 2
[0]	Collar rot or stem canker, *(Alternaria solani)*	[0]	Leaf mold, Race 3
[0]	Early blight defoliation, *(Alternaria solani)*	[ ]	Leaf mold, other races *(Specify)* _____
[2]	Fusarium wilt, Race 1, *(F. oxysporum f. lycopersici)*	[0]	Nailhead spot *(Alternaria tomato)*
[2]	Fusarium wilt, Race 2	[1]	Septoria leafspot *(S. lycopersici)*
[0]	Fusarium wilt, Race 3	[0]	Target leafspot *(Corynespora casiicola)*
[1]	Gray leaf spot *(Stemphylium* spp.*)*	[2]	Verticillium wilt, Race 1 *(V. albo-atrum)*
[0]	Late blight, Race 0, *(Phytophthora infestans)*	[0]	Verticillium wilt, Race 2
[0]	Late blight, Race 1	[ ]	Other fungal disease _____
		[ ]	Other fungal disease _____

9. DISEASE AND PEST REACTION (Use code: 0 = Not tested, 1 = Susceptible, 2 = Resistant -- Continued)

INSECTS AND PESTS:

[0]	Colorado potato beetle *(Leptinotarsa decemlineata)*	[0]	Tomato hornworm *(Manduca quinquemaculata)*
[1]	Southern root knot nematode *(Meloidogyne incognita)*	[0]	Tomato fruitworm *(Heliothis zea)*
[0]	Spider mites *(Tetranychus spp.)*	[0]	Whitefly *(Trialeurodes vaporariorum)*
[0]	Sugar beet army worm *(Spodoptera exigua)*	[ ]	Other *(Specify)* _____
[0]	Tobacco flea beetle *(Epitrix hirtipennis)*		

POLLUTANTS:

[0]	Ozone	[0]	Sulfur dioxide	[ ]	Other *(Specify)* _____

10. CHEMISTRY AND COMPOSITION OF FULL-RIPE FRUITS: Suggested test methods may be found in "Tomato Products," 5th ed., National Canners Assn. Bull. 27-L. Please specify test methods or give a reference to methods used. Fill in table below with values for the new variety and for at least one well-known check variety of similar type grown in the same trial. Specify names or numbers of check varieties.

	SUBMITTED VARIETY	Check Variety UC82B	Check Variety VF6203	Check Variety Peto 81
pH San Juan Bautista, CA 1986/1987	4.34 / 4.37	4.36 / 4.37	4.46 /4.41	4.35 / 4.36
Titratable acidity, as % citric				
Total solids (dry matter, seeds and skin removed)				
Soluble solids, as °Brix San Juan Bautista 1986 and 1987	4.8 / 4.8	4.2 / 4.0	4.6/4.8	4.7/4.7

11. PHENOLOGY: Express length of developmental stages either as calendar days or as heat units (growing degree days), in degrees Celsius. If heat units are used, indicate the base temperature used in their calculation here _____ °C. See paper by Warnock under "References" for method. Give comparative data for at least one check variety; identify checks by name or by number from table on page 1.

	APPLICATION VARIETY	Check variety UC82B	Check variety VF6203	Check variety Peto 81
Seeding to 50% flower (1 open flower on 50% of plants) San Juan Bautista 1986/1987	59/59 days	55/ 51 days	59 /51 days	56 /59 days
Seed to once-over harvest *(if applicable)*				

[3] Fruiting season: 1 = Long ('Marglobe') 2 = Medium ('Westover') 3 = Short, concentrated ('VF 145') 4 = Very concentrated ('UC 82')

[2] Relative maturity in areas tested: 1 = Early 2 = Medium early 3 = Medium 4 = Medium late 5 = Late 6 = Variable (if relative maturity is known to differ by location or environment, please explain on separate sheet).

12. ADAPTATION: If more than one category applies, list all in rank order.

[0][1] Culture: 1 = Field 2 = Greenhouse

[0][0][4][3] Principal use(s): 1 = Home garden 2 = Fresh market 3 = Whole-pack canning 4 = Concentrated products 5 = Other *(Specify)* _____

[2] Machine harvest: 1 = Not adapted 2 = Adapted

[0][9][1][1] Regions to which adaptation has been demonstrated: 1 = Northeast 2 = Mid Atlantic 3 = Southeast 4 = Florida 5 = Great Plains 6 = South-central 7 = Intermountain West 8 = Northwest 9 = California: Sacramento and Upper San Joaquin Valley 10 = California: Coastal areas 11 = California: Southern San Joaquin Valley & deserts

8900031

VARIETY : Colusa (formerly FM48452)
EXHIBIT D : Additional Description of the Variety

Colusa is a medium early, machine harvestable processing tomato with resistance to Verticillium Wilt and Fusarium Wilt race 1 and 2 and with coarse curly foliage. The fruit is light green shouldered while immature, is medium sized, firm and square with medium high soluble solids and medium low pH.

Colusa has significantly lower pH than VF6203 or Peelmech and one third as many puffy (hollow) fruit as VF6203 or Peelmech. The vine spread at harvest is slight larger than VF6203 and distinctly larger than UC82B vines in California. Maturity of Colusa for once over harvest in Woodland, California is about 5 days later than Peelmech and about 5 days earlier than UC82B. The interior color of Colusa fruit is less than VF6203 but better than UC82.

September 26, 1988

8900031

EXHIBIT "E"
Plant Variety Protection Application
No: _____

ASSIGNMENT

I, Courtland G. Nichols, agree and hereby do transfer and assign to FERRY-MORSE SEED COMPANY all my rights, title, and interest in and to that certain variety namely, Colusa (FM48452), for which application for Plant Variety Protection Certificate has been filed. This agreement shall be binding on my administrators, successors, and assigns.

In Witness Whereof, I have executed this agreement this 4th day of November, 1988.

BREEDER

Courtland G. Nichols

EXHIBIT "E"

Plant Variety Protection Application

No: 8900031

STATEMENT OF OWNERSHIP

I, George R. Allbritten, Secretary of Ferry-Morse Seed Company do hereby certify that Ferry-Morse Seed Company is the breeder and owner of that certain variety namely, Tomato, Colusa

for which an application for Plant Variety Protection has been filed.

In witness whereof I have executed this statement of ownership and caused the Ferry-Morse Corporate Seal to be affixed this 27 day of April, 1990.

Secretary

SEAL